

a cardboard box detecting circuit having an input connected to said laser reflection sensor to receive said sensor signals;

15 said box detecting circuit is constructed to generate a "box-detected" signal indicating detection of a box when the magnitude of the output from said laser reflection sensor increases from a low level representing no box to above a predetermined level which represents reflections from a box, with said container
20 detecting circuit having a circuit part that ignores an increase in reflectance from a barcode space element or other highly reflective surface that follows a brief decrease from an adjacent barcode bar element or other similarly thin low reflective marking on the box.

New Claim 7:

7. The system described in claim 6 including:

a data storage device that stores data representing the output of said laser reflection sensor;

5 said box detecting circuit is constructed to generate a signal indicating detection of a box after it detects an output from said laser reflection sensor that has a magnitude that increases from a low level representing no box to above a predetermined box-present level which represents reflections from a box, and with the magnitude remaining above said box-present level for at least a predetermined
10 time representing box movement of a plurality of centimeters representing a container of minimum length, with any drops in magnitude lasting no more than a predetermined period representing barcode elements, being ignored.

New Claim 8:

8. A system for use with box-like containers generally having flat front

5 horizontal path with a minimum space between containers for detecting the containers as well as reading the barcodes, comprising:

a scanning laser source positioned to direct a horizontally scanning laser beam at said path in a direction largely perpendicular to said front vertical surfaces;

10 a laser reflection sensor positioned to detect reflections of said scanning laser beam;

a barcode reader connected to said sensor to detect and read barcodes scanned by said laser beam;

15 container detecting means connected to said sensor to which said barcode reader is connected, for generating signals indicating detection of a container, said detecting means constructed to detect the higher reflectance of said container than a space between containers, and to not mistake a bar of a barcode for a space between containers by the small horizontal length of the barcode compared to said minimum space between subsequent containers.

New Claim 9

5 9. A method for use with a system that includes a transport for moving boxes with forwardly-facing vertical surfaces and with barcodes thereon having vertically elongated regular bar and space elements, along a predetermined largely horizontal path, a scanning laser beam source that directs a scanning laser beam at the path of the barcodes, a laser reflection sensor that produces an electrical output representing the amplitude of reflected light, and a barcode reader connected to said sensor, where the method can detect the leading and trailing ends of each box container whether or not it has a barcode, comprising:

10 detecting the passage of the leading end of a container by detection of an increase in magnitude of output from said laser reflection sensor, from a low magnitude representing noise when no container is present in the path of the laser

higher magnitude for longer than a predetermined period of time